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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,115	12/16/2003	Toni D. Van Gompel	SC13151TP	5496
23125	7590	06/27/2005	EXAMINER	
FREESCALE SEMICONDUCTOR, INC. LAW DEPARTMENT 7700 WEST PARMER LANE MD:TX32/PL02 AUSTIN, TX 78729			GEYER, SCOTT B	
			ART UNIT	PAPER NUMBER
			2812	

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/737,115

Applicant(s)

VAN GOMPEL ET AL. 

Examiner

Scott Geyer

Art Unit

2812

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 13-17 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 and 18-25 is/are allowed.
- 6) ☒ Claim(s) 8 is/are rejected.
- 7) ☒ Claim(s) 10-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>121603</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of claims 1-8, 10-12 and 18-25 in the reply filed on 4-6-05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 13-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4-6-05.

2A. Applicant note: Claim 9 is currently withdrawn as being drawn to a non-elected species. However, claim 9 will be re-joined and allowed if independent claim 8 is placed in condition for allowance. Claim 8 is currently rejected as noted below.

Information Disclosure Statement

3. The references cited in the IDS document submitted on 12-16-03 have been considered.

Drawings

4. The drawings filed on 12-16-03 are acceptable.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

6. The following title is suggested: METHOD FOR ELIMINATION OF EXCESSIVE FIELD OXIDE RECESS FOR THIN Si SOI

7. The disclosure is objected to because of the following informalities:

Paragraph [0002], lines 1 and 9: change "MOAT" to - - moat - -

Paragraph [0002], line 3: change "MOATS" to - - moats - -

Paragraph [0003], line 2: change "A" to - - Å - -

Paragraph [0003], line 5: change "MOATS" to - - moats - -

Paragraph [0012], lines 2, 3 and 4: change "MOAT" to - - moat - -

Paragraph [0013], lines 1 and 9: change "MOAT" to - - moat - -

Paragraph [0036], line 10: change "10" to - - 110 - -

Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9. Claim 8 is rejected under 35 U.S.C. 102(a) as being anticipated by Xiang et al. (6,524,929).

9A. As to claim 8, Xiang et al. teach forming a semiconductor layer 16 over a first insulating layer 14, which is on a semiconductor substrate 12 as seen in figure 5. A second insulating layer 18 is formed on the semiconductor layer 16 as is also seen in figure 5. An opening 26 is etched through the second insulating layer, the semiconductor layer and into the first insulating layer, as shown in figures 6/7. A third insulating layer is formed on the sidewalls of the opening as shown in figures 10/11. A dielectric 42 is filled into the etched opening as shown in figure 12.

Allowable Subject Matter

10. Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record and to the examiner's knowledge does not teach or render obvious, at least to the skilled artisan, the instant invention regarding: the method of making a semiconductor device wherein the second insulating layer has a thickness not greater than about 100 angstroms; the method of making a semiconductor device wherein the third insulating layer has a thickness not greater than about 50 angstroms; the method of making a semiconductor device wherein the second insulating layer is removed and a gate dielectric is formed on the semiconductor layer.

11. Claims 1-7 and 18-25 are allowed.

12. The following is a statement of reasons for the indication of allowable subject matter. The prior art of record and to the examiner's knowledge does not teach or render obvious, at least to the skilled artisan, the instant invention regarding a method of making a semiconductor device particularly characterized by the steps of forming first, second and third insulating layers upon a semiconductor substrate, combined with the formation of an anti-reflection coating (ARC) layer, as recited in each of independent claims 1 and 18 (claims 2-7 are dependent upon claim 1, claims 19-25 are dependent upon claim 18).

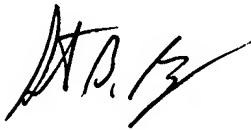
13. The following reference is cited as being particularly related to the applicant's invention: Kajita (6,833,295 B2) – Kajita teach (in figures 1A-1F) forming multiple insulating layers on a semiconductor substrate. However, Kajita do not teach etching through a layer of semiconductor material and filling the etched-opening with dielectric material.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Geyer whose telephone number is (571) 272-1958. The examiner can normally be reached on weekdays, between 10:00am - 6:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Lebentritt can be reached on (571) 272-1873. The fax phone number for the organization where this application or proceeding is assigned is

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703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



6-22-05

Scott Geyer
June 22, 2005